

KALAUZ, A.Ye.; RABINERZON, M.A.; ZAKHARCHENKO, P.I.; BASHKATOV, T.V.;  
POLYAKOV, V.V.; ZAYTSEVA, A.B.

Oil-masterbatched rubbers and their technical characteristics.  
Khim. prom. no.6:333-342 S '57. (MIRA 11:1)  
(Rubber, Synthetic)

DOLGOPLOSK, B.A.; REYKH, V.N.; TINYAKOVA, Ye.I.; KALAUS, A.Ye.;  
KORYUSHENKO, Z.A.; SLADKEVICH, Ye.G.

Carboxyl-containing rubbers. Report no. 2: Basic qualities  
of vulcanizates from carboxyl-containing rubbers. Kauch. i rez.  
16 no.6:1-6 Je '57. (MIRA 10:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo  
kauchuka im. S.V. Lebedeva.

(Rubber, Synthetic)  
(Vulcanization)

64-58-3-2/20

AUTHORS: Kalaus, A. Ye., Lapuk, M. G., Vikulova, T. D.

TITLE: Tubular Reactor for the Continuous Polymerization in Emulsions  
(Trubchatyy reaktor dlya nepreryvnoy polimerizatsii v emul'-siyakh)

PERIODICAL: Khimicheskaya Promyshlennost', 1958, Nr 3, pp. 5 - 10 (USSR)

ABSTRACT: An arrangement is described in which an improvement of the heat emission is reached by using cooled reaction tubes instead of a battery of water-jacketed reactors, thus regulating the stability of the emulsion and the coefficient of the heat transfer with the running-through velocity of the reaction mass. The polymerization can be made according to two basic schemes, the whole arrangement can be started as a totality, or the polymerization can take place in parts of the arrangement. The mixture is guaranteed by circulating pumps which show certain advantages in construction and in operation in the second case. The schematic representation of such a battery of test reaction tubes is given. In the tests in one case an intermixture in

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Tubular Reactor for the Continuous Polymerization in Emulsions

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all four sections took place with the circulating pumps, in the other case in the first section only. Comparative tests of polymerization were made in apparatus with periodic effect and with continuous effect in the test tube arrangement at different temperatures and with different characteristic physico-chemical values of the rubber. The obtained experimental results are given in tabular form and show among other that there is no difference in the characteristic physical-chemical values of the rubber obtained according to the two methods with equal recipes, but that on the other hand the obtained emulsion is more stable in the second case, and that in both cases no formation of coagulum was observed. The experiments that were made with the tube arrangement when only one circulating pump was busy showed that the transformation depth of the monomers is a little smaller, but that the characteristic values of the rubber are the same as those of the working methods mentioned above, but that on the other hand the regulation of temperature is aggravated and that a separation of coagulum takes place. The given data show that a decrease of the diameter of the tubes can shorten the duration of the polymerization,

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and with that also an essentially greater capacity of production was observed in the continuously working system compared to reactors working discontinuously. Tests for the determination of the coefficient of effectiveness at the increase of the number of reactors at continuous polymerizations were made by the collaborators of the VNIISK N. A. Fermorov, A. L. Klebanskiy and N. Ya. Tsukerman. There are 3 figures, 7 tables.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka imeni akademika S. V. Lebedeva (All-Union Scientific Research Institute for Synthetic Rubber imeni S. V. Lebedev, Member, Academy of Sciences, USSR)

- 1. Polmerization--Test results
- 2. Synthetic rubber--Processing
- 3. Industrial equipment--Performance
- 4. Heat transfer

Card 3/3

APUKHTINA, N.P.; KALaus, A.Ye.

Methyl vinyl pyridine rubber. Biul.tekh.-ekon.inform. no.2;12-13  
'59. (MIRA 12:3)  
(Rubber, Synthetic)

KALAU, A.Ye.; RABINERZON, M.A.; FAYNSHTEYN, M.S.; BERESNEV, V.N.

Production of oil rubber without thermal plasticizing. Biul.  
tekhn.-ekon.inform. no.5:23-26 '59. (MIRA 12:8)  
(Rubber, Synthetic)

06216

SOV/64-59-6-8/28

15(8) 24(8)

AUTHORS: Kalaus, A. Ye., Lapuk, M. G., Vikutova, T. D.

TITLE: Determination of the General Coefficients of Heat Transfer in  
Tube Reactors for the Polymerization in Emulsions

PERIODICAL: Khimicheskaya promyshlennost', 1959, Nr 6, pp 411 - 494 (USSR)

ABSTRACT: Reference is made to a paper previously published by the authors  
(Ref 1), from which it can be seen that due to the accumulation  
of the coagel on the vessel surface as well as the change in  
the latex viscosity also the heat transfer coefficient in the  
reaction vessel changes during polymerization. This is also seen  
from the respective data given by VNIIISK and found in publica-  
tions (Refs 2-4) (Table 1). In this connection the general heat  
transfer coefficient as a function of the rate of flow of the mono-  
mers at polymerization temperatures between 5 and 8° (some  
experiments at 13-15°) was determined. The experiments were con-  
ducted in a tube reactor (Fig 1). The reaction mixture was trans-  
ported by means of a circulating pump (maximum output 20 m<sup>3</sup>/h).  
The linear rates of flow of the emulsion in the reactor were  
determined at various pump outputs (Table 2). The amount of  
the heat set free during the mixing by means of the pump was  
determined by means of water and latex SKS-20A, respectively,

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06216  
Determination of the General Coefficients of Heat Transfer in Tube Reactors for the Polymerization in Emulsions SOV/64-59-6-8428

for various flow velocities (Table 3). The measurement results obtained for the general heat transfer coefficients at various experimental conditions (Table 4), at varying degrees of transformation of the monomers (Table 5), at different flow velocities (Table 6), and at a polymerization temperature of 13-15° also (Table 7) permit the following statements: At a polymerization temperature of 5-8° and a flow velocity of 0.014-0.048 m/sec. the general heat transfer coefficient is 90-123 kcal/m<sup>2</sup>.hour.°C. A temperature rise to 13-15° results in a 6-8% increase in the value of the heat transfer coefficient. The general heat transfer coefficient is but little affected by an increase in the degree of transformation of up to 40% (from 140 to 134 kcal/m<sup>2</sup>.hour.°C); a further increase to 70%, however, causes a considerable reduction in the value of the heat transfer coefficient (from 134 to 100 kcal/m<sup>2</sup>.hour.°C). There are 3 figures, 7 tables, and 4 references, 1 of which is Soviet.

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*KRALES, A.Y.C.*

## PAGE 2 BOOK INFORMATION

SOV/2153

Khomyakov, I.V., and S. Korshovich, Eds.-eds.  
Atlas sinteticheskikh polimerov i vysokomolekhnicheskikh sostoianiy (Synthetic Polymers or Monomers for the Production of Synthetic Rubber). Izd-vo Akad. Nauk SSSR, 1960.  
250 p. Twenty slips inserted. 3,500 copies printed.

Scientific Research Institute of Synthetic Rubber, Moscow, Russia  
1. Scientific Research Institute of Synthetic Rubber, Moscow, Russia  
2. Sov. Akad. Nauk, Moscow, Russia  
3. Sov. Akad. Nauk, Moscow, Russia

Monographs, Textbooks and Reference Books. No. 2. Publishing House

This book is intended for chemists, engineers, and technicians working in the synthetic rubber, plastics, and petrochemical industries, and for scientific research scientists affiliated with these industries.

Contents: The book contains articles which report on research carried out at the Scientific Research Institute of Synthetic Rubber (Institute of Synthetic Rubber, Moscow), the Scientific Research Institute of Synthetic Rubber (Institute of Synthetic Rubber, Leningrad) and the Scientific Research Institute of Synthetic Rubber (Institute of Synthetic Rubber, Kiev).

Other articles discuss methods of extracting rubber from synthetic rubber, methods of extracting rubber from other protective media, and generalities are mentioned. References accompany individual articles.

## CONTENTS:

SOV/2153

Bibliography (Cont.)

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28038

S/081/61/000/015/127/139

B102/B101

15.9201

AUTHORS: Reykh, V. N., Dolgoplosk, B. A., Tinyakova, Ye. I., Kalaus,  
A. Ye.

TITLE: Properties of carboxyl-containing rubbers

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 15, 1961, 600, abstract  
15П354 (Sb. "Vulkanizatsiya rezin. izdelyi". Yaroslavl',  
1960, 43 - 55)

TEXT: Results of preliminary tests of butadiene styrene CK-1-30(SK-1-30) divinyl and isoprene rubbers with additions of methacrylic acid are given. Rubbers from SK-1-30 surpassed the rubbers from CK-30 (SKS-30A) with respect to stability to pure-gum mixtures, thermal stability, resistance to thermal aging, widening of cuts, wear, and with respect to elasticity. Carboxyl-containing isoprene rubber shows the least heat release on repeated deformation. [Abstracter's note: Complete translation.]

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S/138/61/000/003/001/006  
A051/A129

11.2211 also 2209

AUTHORS: Reykh, V. N.; Kalaus, A. Ye.; Boguslavskiy, D. B.; Opalev, A. I.; Dubovik, L. I.; Borodushkina, Kh. M., and Fedorova, Yu. I.

TITLE: Ternary copolymers of butadiene, styrene and 2-methyl-5-vinyl-pyridine

PERIODICAL: Kauchuk i rezina, no. 3, 1961, 2-8

TEXT: The technical properties, including wear-resistance, of butadiene-styrene polymers can be improved by introducing links containing functional groups into the polymer chain. The main shortcomings of the copolymers with 2-methyl-5-vinylpyridine are their poor compatibility with other polymers hampering the achievement of satisfactory tensility of the protector rubber bond with the breaker rubber and a high tendency of the mixtures based on double copolymers to scorching. The present article studies the initial materials and the technical properties of ternary copolymers, development of a formulation on its base and the results on industrial tests of protector rubbers of a new type. Ternary copolymers of butadiene, styrene and 2-methyl-

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A051 A129

Ternary copolymers of...

5-vinylpyridine were synthesized on the base of a polymerization formulation adopted for CKC-30A (SKS-30A). The effect of 2-methyl-5-vinylpyridine on the main physico-mechanical properties of vulcanizates was studied and it was found that the ternary copolymers varied depending on the 2-methyl-5-vinylpyridine content (Table 1). They were found to have a higher tensility index and elasticity as compared to rubbers based on the ternary copolymer with  $\alpha$ -methylstyrene. The copolymers of butadiene, styrene and 2-methyl-5-pyridine produced at the ratio of the monomers of 70:25:5 have the most promising properties. Rubbers produced on a CKC-25 MBP5 (SKS-25 MVP-5) base with gaseous channel and anthracene carbon blacks are superior to similar rubbers based on butadiene-styrene rubber in their wear-resistance and resistance to crack growth in repeated deformations. The formulations of the protector rubbers based on SKS-25 MVP-5 material were developed and an experimental batch of tire casings 6,00 - 16 in size to be used for service tests was manufactured. Table 2 shows the results of the physico-mechanical testing of vulcanizates based on SKS-25 MVP-5 and SKMVP-15A, SKS-30A, SKS-30AM for comparison. The important advantage of butadiene, styrene and 2-methyl-5-vinylpyridine copolymers is said to be the high stability to scorching at elevated temperatures

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Ternary copolymers of...

(Fig. 1). The effect of certain vulcanizing agents, such as zinc oxide, magnesium oxide, sulfur, as well as certain accelerators, was investigated (Table 3, Fig. 2). The change in the main properties of the vulcanizates depending on the type and amount of carbon black is shown in Figure 3. The noted characteristics of the vulcanizates based on methylvinylpyridine rubbers are thought to be connected with the intensified interaction between the active functional groups in the molecular chain of the copolymer and the carbon black particles, on the surface of which compounds of an acidic nature are adsorbed. In studying the effect of the different softeners, e. g., standard mixtures of rubrax, fuel oil, avtol-18, extract of the phenol purification of petroleum oils, stearin, fatty acids, pine resin and polydienes on the plasto-elastic and physico-mechanical properties, it was seen that the extract of the phenol purification of petroleum oils (PH-6, PN-6) has the best effect on these properties. Experimental work was carried out to increase the strength of adhesion between the NR breaker tires and the SKS-25 MVP-5 treads by using double-layer treads, where the road rubber contained SKS-25 MVP-5 and the sub-groove rubber SKS-30ARM. The experimental data showed that the fixing of the methylvinylpyridine tread to the NR breaker through a sub-groove layer made of butadiene-styrene rubber ensures a

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Ternary copolymers of...

high strength of adhesion of the doubled system. There are 6 tables, 3 sets of graphs, 9 references: 5 Soviet, 3 English, 1 German.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S. V. Lebedeva i Yaroslavskiy shinnyy zavod (All-Union Scientific Research Institute of Synthetic Rubber im. S. V. Lebedev and the Yaroslavl' Tire Plant)

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Conditions for the ...

replacement of the Nekal emulsifier with soaps of modified colophony (dresinates) and fatty acids with coagulation of the latex using also sodium chloride. The latter substitution alleviates the purification of sewage waters. The results are given of the investigations into the coagulation of butadiene-styrene latexes obtained in the presence of Nekal CKC-30AP(SKS-30AR) and CKC 30APM(SKS-30ARM) or soaps of modified colophony and synthetic fatty acids CKC-30APK(SKS-30ARK) and CKC-30K (SKS-30K) with aqueous solutions of sodium chloride using recycle serum. The obtained data show that the two comparable latexes differ by their rubber content and the magnitude of the surface tension. It has been experimentally established that for a complete coagulation of the SKS-30AR and SKS-30EM latex forming a granular coagulum in the shape of a ribbon a minimum concentration of the sodium chloride in the coagulating solution within the range of 11-12% is required. Analyzing the balance of the serum during the coagulation process, the following equation of salt consumption in the coagulation of the latexes is derived:  $Q = C_2(q + F)$  (1), where Q is the salt consumption, kg/t of rubber,  $C_2$  - concentration of the serum in weight parts, q - the consumption of serum, kg/t, F - quantity of serum carried off with the rubber, kg/t. The removal of the serum is Card 2/6.

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Conditions for the ...

determined from the equations

$$q = \frac{C_o(G_2 - G_1)}{C_o - C_2} - F \quad (2) \quad \text{where } C_o \text{ is the concentration of the}$$

strengthening solution in weight parts (in the case of the use of a solid salt,  $C_o = 1$ ),  $G_2$  - quantity of the reciprocal serum, kg/t,  $G_1$  - the quantity of the coagulated solution, kg/t. Solving (1) and (2), then the general equation for the determination of the salt consumption for latex coagulation with recycle serum is

$$Q = \frac{C_o \cdot C_2 (G_2 - G_1)}{C_o - C_2} \quad (3).$$

First experiments on the coagulation of latexes obtained with soaps of modified colophony and synthetic fatty acids showed that even a small admixture of calcium chloride and to a lesser extent magnesium chloride in the sodium chloride causes a lumpy coagulum. When the granular coagulum is formed two factors are significant: the distribution of the salt and acid and the rate of adsorption of the soap by the particles of Card 3/6

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Conditions for the ...

the rubber in the flocculate which is associated with the rate of the salting-out and affects the redistribution of the soap between the newly formed particles. It was proven that the amount of the serum carried away with the rubber varies within the limits of 76-80% of the total weight of the ribbon, i.e., equals about 4 times the quantity of the rubber. With a decrease in the concentration of the latex, the concentration of the salt in the serum increases and thus its consumption also increases. The obtained experimental material is summarized in the following equation:

$$Q = \frac{10C_2 \cdot C_1 (10^2 - C_3)}{(C_1 - C_2) C_1} \quad (4), \text{ where } Q \text{ is the salt}$$

consumption, kg/t of rubber,  $C_2$  - serum concentration, %,  $C_1$  - concentration of rubber in the latex %. The equation shows that the salt consumption as in the case of the coagulation of the latex containing Nekal depends on the concentration of the serum and the latex. The optimum concentration of the latex ensuring the necessary quantity of the serum is expressed through the relationship:

$$C_{\text{latex}} = \frac{10^2 (100 - F)}{10^2 - F \cdot C_3} \quad (5), \text{ where } C_{\text{latex}} \text{ is the}$$

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A061/A129

Conditions for the ...

optimum concentration of the latex, %, F - quantity of the serum carried off with the rubber, kg/t,  $C_1'$  - salt concentration in the coagulated solution, %,  $C_2'$  - salt concentration in the serum, %. The following salt consumptions were established for industrial types of synthetic rubbers, applicable to the ribbon-forming machines: a) for the SKS-30ARK or SKS-30ARKM at a phase ratio of 1:2 in the polymerization formulation 200-250 kg/t; at a phase ratio of 1:2~~5~~ up to 350 kg/t of rubber; b) for SKS-30K at a phase ratio of 1:1~~5~~150 kg/t of rubber, at a phase ratio of 1:1.8 200 kg/t; c) for SKS-30AR or SKS-30ARM at a strengthening of the serum with a solid salt 500-600 kg/t, in the case of strengthening the serum with a solution of salt up to 100 kg/t. It is concluded that conditions for coagulation of latex with sodium chloride and serum recycle have been developed which reduce considerably the salt consumption. Methods have been found for lowering the salt consumption for coagulation by obtaining more concentrated latexes. The described results were applied at the Voronezh Synthetic Rubber Plant. There are 4 graphs, 3 tables and 2 Soviet-bloc references.

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Conditions for the ...

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im.S.V. Lebedev i Voronezhskiy zavod SK (All-Union Scientific Research Institute of Synthetic Rubber im. S.V. Lebedev and the Voronezh Synthetic Rubber Plant).

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REIKH, V.N.; KALAVS, A.Ya.; BOGUSLAVSKIY, D.B.; OPALOV, A.I.; DUBOVIK, L.I.  
BORODUSHKINA, Kh.N.; FEDOROVA, Yu.I; Prinimali uchastiye: PAVLIKOV, A.;  
KHUDZINSKAYA, L.L.

Triple copolymers of butadiene, styrene, and 2-methyl-t-vinylpyridine.  
Kauch.i rez. 20 no.3:2-8 Mr '61. (MIRA 14:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo  
kauchuka im. S. V. Lebedeva i Yaroslavskiy shinnyy zavod.  
(Rubber, Synthetic) (Butadiene) (Pyridine)

KALAUSHIN, A.Ye.

Synthesis of trimethylcarbinal. Sbor. nauch.-tekhn. inform. Azerb.  
inst. nauch.-tekhn. inform. Ser. Nefteper. i khim. prom. no.2:20-23 '62.  
(MIRA 18:9)

BNATOV, S.A.; KALASHIN, A.Ye.

Refractometric method for determining the concentration of certain synthetic surfaceactive substances in aqueous solutions. Sbor. nauch.-tekhn.-tekhn. inform. Azerb. inst. nauch.-tekhn. inform. Ser. Nefteper. i khim. prom. no.2:34-38 '62. (MIRA 18:9)

KALAUZ, E.

Practices in producing mineral fertilizers with a minimum loss.  
Zemledelie 24 no.11:69-70 N '62. (MIRA 16:1)

1. Zamestitel' predsedatelya ob'yedineniya "Estsel'khostekhnika".  
(Estonia—Fertilizers and manures)

KALAUSHIN, A.YE.

Vereshchagin, N.K., Kalaushin, A.Ye., and Mamedov, S.I. "On the use of petroleum gases in combating harmful rodents", Doklady (Akad. nauk Azerbaydzh. SSR), 1948, No. 12, p. 529-34, (Resume in Azerbaijani).

SO: U-3261, 10 April 53, (Letopis 'zhurnal 'nykh Statey No. 12, 1949)

KALAUSHIN, A. Ye., Cand Chem Sci -- (diss) "Catalytic chlorination of butanes and the hydrochlorination of butylenes." Baku, 1960. 20 pp; (Academy of Sciences Azerbaydzhan SSR, Inst of Petrochemical Processes); 150 copies; free; (KL, 17-60, 141)

ASHIMOV, M.A.; SULTANOVA, A.Sh.; KALAUSHIN, A.Ye.

Azoliat-A, a synthetic surface active agent based on toluene,  
pentane-amylene, and higher boiling fractions. Azerb.khim.zhur  
no.5:65-72 '60. (MIRA 14:8)  
(Surface active agents) (Petroleum products)

MEKHTIYEV, S.D.; KALAUSHIN, A.Ye.

Molybdenum-tungsten catalysts in the reaction of chlorination of  
paraffin hydrocarbons. Azerb. neft. khoz. 40 no.10:37-39 0  
'61. (MIRA 15:3)

(Catalysts) (Paraffins) (Chlorination)

ASHIMOV, M.A.; KALAUSHIN, A.Ye.

Synthesis of alkylatylsulfonates based on thermally cracked  
gasoline involving benzene and toluene. Azerb.khim.zhur. no.6:  
43-49 '61. (Sulfonic acids) (Gasoline) (MIRA 15:5)

ASHIMOV, M.A.; DABASHEVA, Z.A.; KALUSHIN, A.Ye.

Using sulfuric anhydride for sulfuring the reflux of  
thermally cracked mazut. Azerb. neft. khoz. 41 no.9:37-40  
S '62. (MIRA 16:6)

(Sulfuration) (Mazut)  
(Cracking process)

KALAUSHIN, Matvei Matveevich, 1904-

Pushkin v portretakh i illiustratsiiakh; posobie dlia uchitelei srednei shkoly  
Pushkin in portraits and illustrations; aid for secondary schools teachers Izd.  
2., perer. i dop. Leningrad, Gos. uchebno-sedagog. izd-vo, 1954. 374 p.  
(55-57491)

PG3354.K3 1954

MITEL'MAN, M., brigadir; GLEBOV, B., inzh., istorik; UL'YANSKIY, A.; IVANOV, G.A., red.; KALAUZINA, K.Ye., red.; PROTOPOPOV, M.I., red.; ROZANOV, M.D., red.; SACHILO, I., red.; VINOGRADOV, V., mladshiy red.; MOSKVINA, R., tekhn. red.

[History of the Kirov (formerly Putilov) Metallurgical and Machinery Plant in Leningrad] Iстория Кировского (быв. Путиловского) металлургического и машиностроительного завода в Ленинграде. Москва, Изд-во сotsial'no-ekon. lit-ry. Vol.1. [History of the Putilov Plant 1801-1917] Iстория Путиловского завода, 1801-1917. Изд.3. 1961. 711 p. (MIRA 15:2)

1. Leningrad. Institut istorii partii.  
(Leningrad—Machinery industry)

KALAVANOVSKAYA, Ye. I.

USER/Chemistry - Chloral  
Chemistry - Viscometric Analysis

Jan 49

"Viscosity of Systems of Chloral With Alcohols;"  
V. V. Udrovko, Ya. I. Kalavanovskaya, M. F.  
Prokop'eva, Lab of Physicochem, Cen Asiatic  
State U, 3 1/4 pp

"Zhur Obshch Khim" Vol XIX, No 1

Tabular studies of viscosities and densities

of the system of chloral and methyl alcohol  
at 40, 60, and 75° and the system of chloral  
and isoamyl alcohol at 40, 60, and 80° show

that maximum viscosity of the systems is invariably

58/49124

USER/Chemistry - Chloral (Contd) Jan 49

a affected by the alcohol, regardless of the  
value for the viscosity of the chloral. Sub-  
mitted 29 Sep 47.

58/49124

"APPROVED FOR RELEASE: 03/20/2001

CIA-RDP86-00513R000620020009-2

Improvement of the Automat LC/700 model of the threshing machine. p. (4) of cover.  
MECHANISACE ZEMEDELSTVI. Vol. 5, No. 6, Mar. 1955.

SO: Monthly East European Accession, (EEAL), LC, Vol. 4, No. 9, Sept. 1955 Uncl.

APPROVED FOR RELEASE: 03/20/2001

CIA-RDP86-00513R000620020009-2"

"APPROVED FOR RELEASE: 03/20/2001

CIA-RDP86-00513R000620020009-2

KALAY, Juraj, dr. med.

Phylogenesis of the contact point. Zobozdrav. vest., Ljubljana  
9 no. 1-2:22-23 1954.  
(ZEMTH)

\*contact point, phylogenesis)

APPROVED FOR RELEASE: 03/20/2001

CIA-RDP86-00513R000620020009-2"

KURGANOVICH, A.A., inzh.; KALAYDA, A.F., inzh.

Study and solution of an equation of discharge expenditures  
using a differential analyzer. Izv. vys. ucheb. zav., energ.  
7 no.10;72-77 0 '64. (MIRA 17:12)

1. Kiyevskiy avtomobil'no-dorozhnyy institut. Predstavлено  
kafedroy proyektirovaniya dorog.

KALAYDA, A.F. (Kiyev)

Method of two tangents for the numerical solution of the  
Cauchy problem for systems of ordinary differential equa-  
tions. Ukr. mat. zhur. 17 no.6:122-129 '65.

(MIRA 19:1)

1. Submitted May 17, 1962.

KALAYDA, D.

USSR/Cultivated Plants - Commercial. Oil-Bearing. Sugar-Bearing. M-5

Abs Jour : Ref Zhur -Biol., No 7, 1958, 29940

Author : Kalayda, D.

Inst :

Title : Methods of Improving the Quality of Seed.

Orig Pub : Sakharnaya svekla, 1957, No 3, 33-35

Abstract : Tests made at the veselo-Podolyanskaya Experimental Selection Station in Poltavskaya Oblast' in 1950-1955 have shown that there is increased seed germination with an increase in the largeness of the seed ball. The average weight of 100 plants, germinating from seed balls with a diameter of 5 mm, was twice as large in 5 days after the appearance of sprouts than the weight of 100 shoots which germinated from seed balls 2.5 mm in diameter. When the sugar beet seeds were subjected to additional cleaning in a separator with an air flow, 9% of the light-weight seeds were removed, and when cleaned in sieves the

Card 1/2

- 30 -

LEONOVICH, B.N., inzh.; KALAYDA, I.S., inzh.

Achieving a high operative efficiency of diesel locomotives. Zhel.  
dor.transp. 45 no.8:65-69 Ag '63. (MIRA 16:9)

1. Nachal'nik depo Grebenka Yuzhnay dorogi (for Leonovich).
2. Nachal'nik tekhnicheskogo otdeła depo Grebenka Yuzhnay dorogi  
(for Kalayda).

(Diesel locomotives)

LEONOVICH, Boris Nikolayevich; KALAYDA, Ivan Stepanovich;  
KOKOULIN, I.I., red.

[Depot of advanced technology; from the experience of  
the Grebenka Locomotive Depot of the Southern Railroad]  
Depo peredovoi tekhnologii; iz opyta lokomotivnogo depo  
Grebinka IUzhnoi dorogi. Moskva, Transport, 1964. 29 p.  
(MIRA 17:12)

1. Chlen Nauchno-tekhnicheskogo obshchestva zheleznodorozh-  
nogo transporta, komandir depo Grebenka Yuzhnoy dorogi (for  
Leonovich, Kalayda).

AZIMOV, S.A.; KALAYDZIDU, Ye.I.; KORDUB, N.V.; SLEPAKOVA, S.I.; USMANOV,  
Kh.U.

Determining the integral heat of wetting of natural silk irradiated with gamma rays. Dokl.AN Uz.SSR no.12:13-15 '59.

1. Fiziko-tehnicheskiy institut AN UzSSR. 2. Chlen-korrespondent  
AN UzSSR (for Usmanov).

(Silk)

(Heat of wetting)

(Gamma rays)

KALAYDZHIEV, G.  
SURNAME (in caps); Given Names

2

Country: Bulgaria

Academic Degrees: Doctor

Affiliation: Aspirant at the Scientific Research Institute for Health  
Resort Study, Balneology, and Physiotherapy (NIIKF)  
Source: Sofia, Priroda, No 1, Jan/Feb 61, pp 57-65

Data: "Mineral Springs in the Blagoevgrad Okrug."

Co-author:

IVANOV, G., Chemist

MNDZHOYAN, A.L.; AFRIKYAN, V.G.; KALAYDZHYAN, A.Ye.; KAZARYAN, L.Z.;  
MARKARYAN, E.A.

~~Derivatives of furan. Report No.29: Amino esters of 4,5-substituted 2-furancarboxylic acids. Izv. AN Arm.SSR. Khim. nauki 16 no.2:175-179 '63~~  
(MIRA 17:8)

1. Institut tonkoy organicheskoy khimii AN ArmSSR.

KALAYDZHIYEV, V. [Kalaïdzhiev, V. Kh.]; YOMTOV, M. [Iomtov, M. I.];  
STOIANOVÀ, N. [Stoianova, N.]

A comparative analysis of the antigens of the *S. typhi* (TY-2) strain, and the vaccines obtained from it by precipitation in agar. Trudy epidemiol mikrobiol 8:17-20 '61 [publ. '62].

1. Otvetstvennyi redaktor, "Trudy Nauchno-issledovatel'skogo instituta epidemiologii i mikrobiologii" (for Kalaïdzhiev).
2. Chlen Redaktsionnoy kollegii, "Trudy Nauchno-issledovatel'skogo instituta epidemiologii i mikrobiologii" (for Iomtov).

MDZHOYAN, A.L.; MARKARYAN, E.A.; SOLOMINA, L.P.; KALAYDZHIAN, A.Ye.

Derivatives of furan. Part 30: Synthesis and some transformations  
of substituted  $\alpha$ -cyanofurans. Izv.AN Arm.SSR.Khim.nauki 17  
no.1:89-94 '64. (MIRA 17:4)

1. Institut tonkoy organicheskoy khimii AN Armyanskoy SSR.

MOROZOV, Yu. N.; KALAYDZYAN, R.A.; OGANESEYAN, A.T.; TRAVUSHKIN, G.M.;  
TYABLIKOV, Yu.Ye.; CHESTNIKOV, V.M.; FONGAUZ, V.N.

Instrumentation of hydropulsating racks manufactured in the  
Soviet Union. Zav.lab. 28 no.10:1270-1274 '62 (MIRA 15:10)

1. TSentral'nyy nauchno-issledovatel'skiy institut stor'tel'nykh  
konstruktsiy, Spetsial'noye konstruktorskoye byuro ispytatel'nykh  
mashin i Armavir'skiy zavod ispytatel'nykh mashin.  
(Testing machines)

KALAYEV, A.A.

Calculation of the stability of foundations of large structures  
on sandy soil. Osn., fund.i mekh.grun. 4 no.5:3-6 '62.  
(MIRA 15:12)  
(Foundations--Models)

KALAYEV, A.I.

Experimental study of the stability of foundations on non-rocky  
soil. Osn., fund. i mekh. grun. 7 no.4:7-10 '65.

(MIRA 18:8)

Kalinin, A. I.

"On the Resistance to Buckling of Fenced Soil Masses," Izv. Vses. N.-i. in-ta Gidrotekhniki, Vol 31, 1954, pp 136-151

This is a presentation of the results of an experimental and analytical investigation of the stability of soil masses which were fenced around with parallel vertical partitions. The experimental study was conducted on models of parallel partitions, whereas the analytical investigation was based on the solution of the plane problem of the theory of limiting equilibrium of a friable medium. (RZMekh, No 5, 1955) SC: Sun.No. 713, 9 Nov 55

USSR / Soil Science. Mineral Fertilizers.

J-4

Abs Jour: Rof Zhur-Biol., No 8, 1958, 34416.

Author : Kalaykow, G., Shapiro, S., Koval', I., Sechko, A.  
Inst : Agrobiological Experiment Station of the Tyumen  
Podagogical Institute.  
Title : Humates of Sodium - Valuable Fertilizer for Siberia.

Orig Pub: S. kh. Sibiri, 1957, No 4, 55-58.

Abstract: On weak, lixiviated black earth, the Agrobiological Experiment Station of the Tyumen Podagogical Institute conducted experiments with corn - sprayed with 0.001% solution of humate of sodium - at three fixed dates: May 25th, June 10th and July 7th. Only after the third spraying, the beneficial effect of the humates on the vegetative part of the plant was established as follows: the

Card 1/2

S/065/60/000/011/003/009  
E030/E412

AUTHORS: Kreyn, S.E., Kalayman, Ye.N., Abramovich, S.Sh.,  
Gol'berg, D.O., Stupishin, Yu.V. and Smirnova, N.I.

TITLE: Preparation of Low Pour Point Distillate Oils of Type  
MK-8(MK-8) From Tuymazy Devonian Crudes

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1960, No.11,  
pp.11-14

TEXT: A method has been developed for obtaining high quality low pour point distillate lubricating oils of type MK-8 from Tuymazy Devonian crude and from Balakhany, Dossor and Anastas'yevka crudes. Previous methods for obtaining MC-8 (MS-8) and transformer oils from sulphurous Tuymazy Devonian crudes had used refining with phenol, followed by MEK/toluene or acetone/toluene extraction of paraffins, and by contacting with clay; they all failed on oxidation stability. The present method takes a very narrow cut (IBP and 7,12,28,32,47,54 and 64% boiling at 47,85,120,205,225,300, 330 and 350°C respectively), refines with phenol, and extracts the paraffins by chilling to -65°C with a mixture of ammonia and ethanol and uses no further contacting. Typical data for the oil are: density 0.835 gm/cc; flash point (closed) 158°C;

Card 1/2

S/065/60/000/011/003/009  
E030/E412

Preparation of Low Pour Point Distillate Oils of Type MK-8 (MK-8)  
From Tuymazy Devonian Crudes

viscosity 6.5 centistokes at 50°C; sulphur content 0.37%. It satisfies specification FOCT 6547-33 (GOST 6547-33) with a pour point of -55°C. Even higher qualities may be obtained by further fractionation, putting the 305 to 355°C cut through a column with a 250 to 253°C base temperature and taking the 50 to 65% cut with a viscosity of 5.9 to 6.3 centistokes at 50°C. This oil is superior both to MK-8 and transformer oil, with lower viscosity, smaller viscosity-temperature slope from -20 to +50°C and greater oxidation stability on addition of 0.2% Ionol anti-oxidant (meeting specification FOCT 981-85 (GOST 981-85)). If 0.7% Ionol is added, exceptional high temperature oxidation stability is obtained, giving only 0.1 gm KOH per gm of oil for oxidation at 170°C. There are 2 tables.

Card 2/2

KALAYTAN, G. S.

"Alfalfa Seed Growing on the Northern Wooded Steppes of Kemerovskaya Oblast." Cand Agr Sci, Omsk Agricultural Inst, Omsk, 1953. (RZhBiol, No 3, Oct 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (10)

So: Sum. No. 481, 5 May 55

Country : USSR  
Category : CULTIVATED PLANTS. POTATOES, Vegetables. Cucurbits.

Abstr. Jour. : ELF ZHUR-BIOL., 21, 1956, NO. 95988

Author : Kaleytan, G.S.  
Institut. : TOMSK UNIV.

Title : High Potato Yields in Heavily Mechanized Farming

Orig. Pub. : Tr. Tomskogo un-ta, 1957, 140, 128-135

Abstract : Agrotechnical hints are given on raising potatoes in the livestock producing sovkhozes within the zone of Mariinskaya Experimental Station (Kemerovskaya Oblast'). In tests run 1947-1950, manure applied in a dose of 40 t/ha boosted the yield by 42%, a combination of manure (20 t/ha.) and N45 P45 K45 by 48%, and N90 P90 K90 by 49%. The most favorable sowing times were the fifth and sixth five-day period in May, where the soil at a depth of 10 cm kept a steady temperature of not

Card: 1/2

"APPROVED FOR RELEASE: 03/20/2001

CIA-RDP86-00513R000620020009-2

KALAYTAN, M.G.

Petrochemical characteristics of the Baimak-Burbay volcanic rocks  
in the Southern Urals. Trudy VSEGEI 86:119-136 '62. (MIRA 17:11)

APPROVED FOR RELEASE: 03/20/2001

CIA-RDP86-00513R000620020009-2"

KALAYTAN, YE.

Kalaytan, Ye. "A new pistol-type faucet for delivery of fuels", Tyl i snabzheniye voorush, sil, 1948, No. 12, p. 30-31.

SO: U-2888, 12 Feb. 53, (Letopis' Zhurnal 'nykh Statey, No. 2, 1949).

KALAYTAN, YE. N.

AID P - 579

Subject : USSR/Engineering

Card 1/1 Pub. 78 - 16/22

Authors : Burdarov, I. P. and Kalaytan, Ye. N.

Title : Experimental investigation of temperature conditions  
in surface tanks

Periodical : Neft. Khoz., v. 32, #8, 67-75, Ag 1954

Abstract : The importance of the temperature variation in vertical  
and horizontal gasoline tanks is discussed on the basis  
of experimental data of temperature changes during selec-  
ted periods of time under varying geographical and mete-  
orological conditions. The ratio of temperature of vapor  
space to the outside air or the ratio of the temperature  
of the body of the tank to the roof temperature served as  
criterion for comparison. Analysis of the experimental  
results leads to definite relationships for maximum,  
average and minimum temperatures. 6 tables, 8 charts and  
7 Russian references (1931-1950).

Institution : None

Submitted : No date

5.1110,15.5000

77542  
SOV/65-60-2-2/15

AUTHORS: Kreyn, S. E., Kalaytan, Ye. N., Stupishin, Yu. V.

TITLE: Anastas'yevsk Crude Oil as a Raw Material for Production of MK-8-Type Lubricants

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1960, Nr 2,  
pp 6-11 (USSR)

ABSTRACT:  
The sulfur- and paraffin-free crude oil from the Anastas'yevsk deposit recently began to be used for the production of transformer-, MVP-, spindle AU-, and some other oils. The possibility of its use for production of MK-8-type lubricant was examined. Crude oils from only a few deposits are thus far used for this purpose, since the solid point, stability, distillation range, viscosity, and density of the lubricant must meet very strict specifications. The experiments, undertaken by M. G. Mitrofanov, et al., in the Scientific Research Institute of Groznyy (Groz. NII), failed to produce satisfactory MK-8 lubricant from Anastas'yevsk oils.

Card 1/3

Anastas'yevsk Crude Oil as a Raw Material  
for Production of MK-8-Type Lubricants

77542  
SOV/65-60-2-2/15

The necessity of a high-degree purification was obvious. This was achieved in the Yaroslavl' and Gor'ki refineries, and by the authors, after trial experiments in which 6.4% to 50% H<sub>2</sub>SO<sub>4</sub> solutions were used. The experimental data revealed that the distillates purified with 6 to 10% H<sub>2</sub>SO<sub>4</sub> had density, aniline point, and viscosity not consistent with the specifications. The distillates purified with 50% H<sub>2</sub>SO<sub>4</sub> had satisfactory density, aniline point, and viscosity; addition of 0.1% ionol improved their antioxidation properties. However, light fractions of MK-8 form Anastas'yevsk oil and those of trade specimens evaporate easily, and the viscosity of the residue increases at low-temperatures by 4 to 5 times. If, instead of a distillate whose boiling point ranges from 260 to 440° C, one selects a distillate with 45% of fractions boiling at 320-370° C, the viscosity of MK-8 improves essentially (Table 5). The MK-8, composed of a narrow range of fractions and tested in plants, proved to be of much higher quality than commercial MK-8 lubricant from crude oils of Baku. There are 5 tables; and 3 Soviet references.

Card 2/3

TABLE 5. PHYSICOCHEMICAL PROPERTIES OF  
EXPERIMENTAL OIL SAMPLES COMPOSED  
OF NARROW RANGE OF FRACTIONS  
FROM ANASTAS'YEVSK CRUDE OIL.

77542 SOV/65-60-2-2/15  
EXPERIMENTAL SAMPLES OF LUBRICANTS  
FROM ANASTAS'YEVSK CRUDE OIL

Physicochemical Characteristics	All-Union State Standard (GOST) 1457-53 MK-8 oil	EXPERIMENTAL SAMPLES OF LUBRICANTS FROM ANASTAS'YEVSK CRUDE OIL		
		Laboratory OPTIMUM (Sample 1)	FROM REFINERY IN STALLION "GOR'KI" (Sample 2)	FROM REFINERY IN DISTILLATING INSTALLATION "GOR'KI" (Sample 3)
SAMPLE 1. KINEMATIC VISCOSITY IN CENTISTOKES				
AT 50°C	NOT BELOW 8,3	5,6	5,8	6,1
AT 20°C	NOT ABOVE 30,0	15,3	16,6	17,4
AT -40°C BEFORE EVAPORATION	6000—7000	2450	2100	2600
AT -40°C AFTER EVAPORATION	18000—21000	3800	8400	4600
SAMPLE 2. KINEMATIC VISCOSITY AT 50°C DIVIDED BY THE KINEMATIC VISCOSITY AT 20°C (RATIO)	NOT MORE THAN 80,0	48,4	45,2	42,7
SAMPLE 3. STABILITY: PRECIPITATE AFTER OXIDATION, %	NOT MORE THAN 0,1	0,14	0,05	0,08
ACID NUMBER AFTER OXIDATION IN mg KOH PER 1% OIL				
SAMPLE 4. FLASH POINT IN CLOSED CRUCIBLE, °C	NOT MORE THAN 0,35	0,33	0,34	0,34
SAMPLE 5. FREEZING POINT, °C	NOT BELOW -135	142	129	145
SAMPLE 6 DENSITY AT 20°C	NOT ABOVE -55	-58	BELOW -55	-64
SAMPLE 7 ANILINE POINT, °C	NOT MORE THAN 0,885	0,885	0,883	0,880
SAMPLE 8 EVAPORATION, %	NOT BELOW 70 22—24	81,0 23,0	65,0 37,0	63,0 23,0

Card 3/3

KREYN, S.E.; KALAYTAN, Ye.N.; ABRAMOVICH, S.Sh.; GOD'BERG, D.O.;  
STUPISHIN, Yu.V.; SMIRNOVA, N.I.

MK-8-type low pour-point distillate oil from the Tuymazy  
Devonian petroleum. Khim.i tekhn.topl.i masel 5 no. 11:11-14  
N '60. (MIRA 13:11)

(Lubrication and lubricants)

GOL'DBERG, D.O.; KREYN, S.E.; KALAYTAN, Ye.N.; KICHKIN, G.I.;  
MINKHAYROVA, S.A.; TRUBENKOVA, N.N.

Methods for obtaining oils with improved low-temperature  
properties from sour curde. Trudy BashNII NP no.6:105-111 '63.  
(MIRA 17:5)

24.4302

S/044/62/000/005/024/072  
C111/C333

AUTHOR: Kalazhokov, Kh. Kh.,

TITLE: On the question of the irregular movement of the Aerosol-particles in the case of small Re numbers

PERIODICAL: Referativnyy zhurnal, Matematika, no. 5, 1962, 80, abstract 5B361. ("Uch. zap. Kabardino-Balkarsk. un-t," 1961, no. 13, 55-57)

TEXT: The Cauchy problem for the one-dimensional movement of a spherical particle in a medium with resistance reads

$$a \frac{dv}{dt} = F(t) - v - \alpha \int_0^t \frac{dv}{dx} dx, \quad v = 0 \text{ for } t = 0. \quad (1),$$

where  $a$  and  $\alpha$  are constants and  $F(t)$  is a given function. The author solves problem (1) with the help of the Laplace transformation and examines the asymptotic behavior of the solution for large and small  $t$  in the special case of a constant force  $F(t)$ .

[Abstracter's note: Complete translation.]  
Card 1/1

✓3

KALAZHOKOV, Kh.Kh.; GUTMAN, L.N.

Dynamic structure of meteorological fronts. Izv. AN SSSR. Ser.  
geofiz. no.1:136-149 Ja'64. (MIRA 17:2)

1. Kabardino-Balkarskiy gosudarstvennyy universitet.

ACCESSION NR: AP4014031

S/0049/64/000/001/0136/0149

AUTHORS: Kalazhokov, Kh. Kh.; Gutman, L. N.

TITLE: The dynamic structure of fronts

SOURCE: AN SSSR. Izv. Seriya geofizicheskaya, no. 1, 1964, 136-149

TOPIC TAGS: front, air front, cold front, air circulation, ascending air current, descending air current, convection

ABSTRACT: This work combines and develops the ideas of A. F. Gyubyuk and F. K. Ball (discussed in a number of articles) and attempts to find the form of the frontal surface separating two thermally different air masses. The present authors also investigate the movement of the air that may take place near and immediately next to the surface. For this purpose they have simplified the system of equations for hydrodynamics of the atmosphere on the basis of the following assumptions:  
1) a horizontal scale on the order of  $10^2$ - $10^3$  km, 2) a disturbance of temperature and pressure small in comparison with the average for the given height, 3) acceleration of equalizing movements may be neglected, 4) the frontal surface is cylindrical, elongated along the y direction, 5) the frontal surface is displaced

Card 1/2

AUTHORS: Persiantseva, V. P., Kudryavtsev, N. T. and Kalb, V.M.

TITLE: Bright Copper Profiled Components Produced from Acidic Electrolytes (Blestyashcheye medneniye profilirovannykh izdeliy iz kislykh elektrolitov)

PERIODICAL: Metallovedeniye i Obrabotka Metallov, 1958, Nr 9, pp 42-46 (USSR)

ABSTRACT: Various authors have pointed out the possibility of producing a bright copper plating from cyanide and acidic solutions (Ref 1). Much attention to this problem is paid in an earlier paper of the team of the authors of this paper (Ref 2) in which it was shown that the most intensive component of an acidic electrolyte bringing about brightness is thiourea. However, if a certain amount of thiourea is present, the precipitates will be very brittle and unserviceable for layer thicknesses exceeding 5μ (Ref 3). V.G. Solokhina, N. T. Kudryavtsev and Lapatukhin, V.S. (Ref 2) proposed an electrolyte containing 250 g/litre CuSO<sub>4</sub>; 5 H<sub>2</sub>O; 50 g/litre H<sub>2</sub>SO<sub>4</sub>; 0.005 g/litre thiourea and 0.5 g/litre sodium salt, 2.6 (and 2.7) naphthalene diacid which reduces the brittleness of the copper

Card 1/5

Bright Copper Profiled Components Produced from Acidic Electrolytes

SOV/129-58-9-10/16

deposits resulting from the introduction of thiourea. This electrolyte was tested in the printing industry for copper cylinders intended for deep engraving. A current density of up to  $10 \text{ A/dm}^2$  is permissible for depositing copper onto a rotating cylinder; during the process the electrolyte was agitated by means of compressed air. The temperature of the electrolyte should be 15 to  $22^\circ\text{C}$  and the produced coatings have a hardness up to  $250 \text{ kg/mm}^2$ . As a result of investigations, the authors developed a regime of depositing the coatings on profiled components and a technique of purifying the electrolyte from the accumulating decomposition products. The data obtained in laboratory investigations were verified under shop conditions. The laboratory investigations were carried out in electrolytic baths of 1 and 6 litre capacity incorporating a rotating cathode. Low carbon steels with a total surface area of  $0.2 \text{ dm}^2$  were coated and as anodes sheets of electrolytic copper were used. Depending on the current density, the duration of the

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coating was varied in such a way as to obtain coatings of a thickness of about  $20\mu$ . The pilot plant tests were carried out in a bath of 200 litre capacity, maintaining a bath temperature of 12 to 20°C. The concentrations of the sulphuric acid, the sodium salt and the thiourea were respectively 90, 0.5 and 0.005 g/litre; the current density was  $3-10 \text{ A}/\text{dm}^2$ , the temperature 12 to 20°C. As the brightness of the copper deposits decreased, thiourea was added. Naphthalene sulfonic acid was introduced at the rate of 0.04 to 0.06 g per Ah. The data given in the Table, p 43, show that, up to a certain current density, the copper deposits are bright for the electrolytes used in the experiments ( $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$  contents of 146, 200 and 250 g/litre). With increasing concentration of the copper sulphate, the permissible current density for which bright deposits are obtained will increase somewhat. However, in a solution with an increased concentration of copper sulphate, a rapid saturation of the near anode layer takes place

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involving separation of copper sulphate crystals. Therefore, an electrolyte with an average copper sulphate concentration of 200 g/litre was used for which the optimum current density is  $326 \text{ A/dm}^2$ . Works experiments are also described. The 15 to  $20\mu$  thick copper layer is produced in 20 to 25 mins. If the specified technological regime is adhered to, the brightness of the copper coating produced from acidic copper electrolytes containing additions of brightening reagents will be at least as high as for mechanically polished coatings. The brightness of nickel deposited on such a copper layer will be higher than that of nickel deposited on a chemically polished or mechanically polished copper layer. At present in the Krasnyy Oktyabr' Works copper coating is effected only in accordance with this regime and this enabled improving the productivity and reducing the number of copper

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plating baths from 16 to 4.

There are 2 figures, 1 table and 3 references, 2 of  
which are Soviet, 1 English.

ASSOCIATION: Moskovskiy khimiko-tehnologicheskiy institut  
imeni Mendeleyeva (Moscow Chemical-Technological  
Institute imeni Mendeleyev)

1. Copper plating--Test results    2. Electrolytes--Properties

Card 5/5

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DUYSHENALIYEVA, N.; AKBAYEV, A.; KAZIYEV, K.; GOLOVIN, F.I.;  
BAKASOVA, Z.; KOVALENOK, Z.P.; SHELUKHINA, N.P.; BUGUBAYEV, A.B.,  
starshiy prepodavatel'; BAYBULATOV, E.B., mladshiy nauchnyy  
sotrudnik; FILIPPOV, N.A., mladshiy nauchnyy sotrudnik; MAMBETAKUNOV, T., aspirant; IMANKULOV, A., aspirant; TURMAMBETOV, S.,  
mladshiy nauchnyy sotrudnik; MUKHAMEDZIYEV, M.M., nauchnyy sotrudnik;  
KOMURBAYEV, A.O.; PAK, L.V.; HUDAKOV, O.L.; TOKTOSUNOV, A.;  
KULAKOVA, R.I.; ASHIRAKHMANOV, Sh., aspirant; ALYSHBAYEV, B.;  
SULTANALIYEV, A.; AKHMETOV, K.; POLONOVA, A.P.; NIKITINSKIY, Yu.I.;  
SHAMBECHOV, S.Sh.; DZHUMBAYEV, B.O., nauchnyy sotrudnik; DRUZHININ,  
I.G., red.; ANOKHINA, M.G., tekhn.red.

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(Continued on next card)

KYDYNOW, M.---(continued) Card 2.

1. Akademiya nauk Kirgizskoy SSR, Frunze.
2. Institut khimii AN Kirg.SSR (for Kydynov).
3. Kirgizskiy gosudarstvennyy universitet (for Bugubayev).
4. Institut geologii AN Kirg.SSR (for Baybulatov).
5. Institut vedenogo khozyaystva i energetiki AN Kirg.SSR (for Filippov).
6. Otdel fiziki i matematiki AN Kirg.SSR (for Mametakunov, Imankulov).
7. Institut zoologii i parazitologii AN Kirg.SSR (for Turmambetov).
8. Kirgizskiy meditsinskiy institut (for Mukhamedniyev).
9. Otdel pochvovedeniya AN Kirg.SSR (Ashirakhmanov).
10. Institut botaniki AN Kirg.SSR (for Alyshbayev, Sultanaliyev, Akhmetov, Pelenova, Nikitinskiy).
11. Institut istorii AN Kirg.SSR (for Dzhumbayev).

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gist. i embr. 37 no.7:103-108 J1 '59. (MIRA 12:10)

1. Kafedra normal'noy anatomii cheloveka (zav. - prof.V.A.Kal'-  
berg) Rizhskogo meditsinskogo instituta.  
(ANATOMY, education)

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1. Institut sel'skogo khozyaystva nechernozemnoy zony, pochtovoye  
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2. Saratovskaya toksikologicheskaya laboratoriya Vsesoyuznogo  
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2. Kustanayskaya opytnaya sel'skokhozyaystvennaya stantsiya (for Badulin).
3. Zaveduyushchiy kafedroy zashchity rasteniy TSelinnogradskogo sel'skokhozyaystvennogo instituta (for Roktanen).
4. Toksikologicheskaya laboratoriya, pochtovoye otdeleniye Tolstopal'tsevo, Moskovskoy oblasti (for Kal'bergenov, Lyakh).
5. Zaveduyushchaya laboratoriyye biometoda, Lubny, Poltavskoy oblasti (for Petrova).

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